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Guidance for the Reregistration of Pesticide Products Containing Atrazine as the Active Ingredient

(U.S.) Environmental Protection Agency
Washington, DC

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U.S. Department of Commerce
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GUIDANCE FOR THE REREGISTRATION OF PESTICIDE PRODUCTS CONTAINING ATRAZINE AS THE ACTIVE INGREDIENT

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS
WASHINGTON, D.C. 20460

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This document contains information regarding reregistration of pesticide products containing the subject active ingredient. The document includes how to register under a registration standard, regulatory position and rationale, and summaries of data requirements and data gaps. Also included is a bibliography containing citations of all studies reviewed by EPA in arriving at the positions and conclusions contained in the standard.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

CERTIFIED MAIL

SUBJECT: Initiation of Reregistration Process for Pesticide Products Containing Atrazine as the Single Active Ingredient

Dear Registrant:

In accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, EPA's Office of Pesticide Programs has begun the reregistration process for pesticide products containing the subject ingredient. Significant changes to the statute were made in 1972, 1975, and 1978; thus, current requirements may be substantially different from those in effect at the time your product(s) were registered. The first phase of reregistration requires that you (1) make a commitment to the Agency regarding data development and (2) subsequently submit revised product labeling and associated information.

This mailing contains the Guidance Document for preparation of submissions, as well as a listing of your affected product(s) (Attachment A), and a separate list of registrants with products subject to this standard and which contain this active ingredient (Attachment B). The latter list is for the purpose of cooperative data development.

The Guidance Document sets out the Agency's evaluation of all available data pertaining to the subject chemical and its registered uses, and its rationale for the regulatory actions being taken at this time. Additionally, the Guidance Document contains instructions describing certain of the

steps you must take to maintain registration for your product(s). Products not brought into compliance with the Guidance Document as supplemented by subsequent information from EPA about compliance with certain data support requirements will be subject to suspension and/or cancellation.

Specifically, the enclosed Guidance Document does the following:

1. Introduces the purpose of this document.

2. Explains the Agency's policy regarding data submission and identifies, in table format, the data that must be submitted to complete the Agency's evaluation of each product. In addition, a bibliography identifying the data which is considered part of the data base supporting the registration standard is included.

3. Sets out time-frames for submission of required data.

4. Explains how to revise labeling for maufacturing use products. (As the Guidance Document explains, labeling is not required at this time.)

5. Provides submission instructions.

Because of the variety and complexity of the requirements, and the short statutory time-frames available for certain actions, it is essential that you understand the specific requirements and procedures in order that you may respond in a correct and timely manner. Since a part of these requirements is under Section 3(c)(2)(B) of FIFRA, your first response may be required within 90 days from receipt of this letter. Please note that <u>if you do not respond or do not comply fully with the requirements, your application may be rejected or your product registration cancelled or suspended</u>.

If, after reviewing this material, you do not understand what you must do or how or when you must respond, please contact the Product Manager listed below who will assist you in every reasonable way. If you wish to discuss the data requirements or request that certain data be waived, you must write to the Agency and indicate those data requirements with which you take issue and your rationale for doing so. After the Agency has had a chance to review your submission, the Product Manager will contact you to set up a meeting for the purpose of resolving all issues relative to data requirements.

Please note that this guidance document will eventually be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined by the District Court for the Eastern District of Missouri from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because of this unresolved situation, EPA has decided to proceed with the requirements in this guidance package which do not relate to the "data licensing" issue and to supplement the package with additional guidance when circumstances permit.

If you have any questions concerning this Guidance Document, you may contact the Product Manager listed below:

Mr. Robert Taylor
Product Manager 25
Registration Division (TS-767)
Office of Pesticide Programs
Environmental Protection Agency
Washington, D.C. 20460

Sincerely,

Douglas D. Campt, Director
Registration Division (TS-767)

Enclosure

Note: The Agency has also included as an attachment the "Summary of EPA's Decision on Responses from Registrants to the Data Call-In Letter." The Data Call-In process has terminated. Please follow the Guidance Document for instructions describing the steps you must take to maintain registration for your product(s).

ATTACHMENT A

PRODUCTS AFFECTED BY THIS
REREGISTRATION PROCESS

Following is a list of your products affected by this reregistration process. If this list is incomplete or inaccurate in any way, please notify the Product Manager (PM) identified in the letter.

ATTACHMENT B

REGISTRANTS WITH PESTICIDE PRODUCTS CONTAINING
THE ACTIVE INGREDIENT

The information attached will allow registrants with pesticide products containing the above ingredient to contact one another regarding joint data development or sharing the cost of data development under section 3(c)(2)(B) of FIFRA. This information includes the following: EPA Reg. No., company name, company address, active ingredient, percentage of active ingredient and type of formulation, such as Manufacturing-Use Product (MP), Technical Product (TP), Wettable Powder (WP), and Emulsifiable Concentrate (EC).

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NOTE: Attached to this document are copies of the letters used to transmit the document to registrants and notify them of required studies.

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II-1	Bibliography
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II-3	Certification of Attempt to Enter Into an Agreement With Other Registrants for Development of Data EPA Form 8580-6
III-1	Product Specific Data Report (End-Use Products) EPA Form 8580-4
IV-2	Table of Labeling Requirements and Sample Labels
IV-3	Physical/Chemical Hazards Labeling Statement
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Note: Appendices IV-1, IV-4 and IV-6 are not germane to this document and are not included.

INTRODUCTION

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA Section 3(g), as amended in 1978, directs EPA to reregister all pesticides as expeditiously as possible. Each registrant of a manufacturing use product of the active ingredient who wishes to continue to sell or distribute that product must apply for reregistration.

To fulfill this Congressional mandate, we have established the Registration Standards program which will review all pesticide active ingredients first registered before January 1, 1977. These pesticides will be reviewed in use clusters which are prioritized on the basis of a ranking scheme giving preference to pesticides used on food and feed crops.

The Registration Standards program involves a thorough review of the scientific data base underlying pesticide registrations and an identification of essential but missing studies which may not have been required when the product was initially registered or studies that are now considered insufficient. Our reassessment results in the development of a regulatory position, contained in this document, on each pesticide and its uses. The regulatory position may require the registrant to modify product labels to provide additional precautionary statements, restrict the use of the pesticide to certified applicators, provide reentry intervals, modify uses or formulation types, specify certain packaging limitations, or other requirements to assure that proper use of the pesticide poses no potential adverse effects to human health or the environment.

The scientific review, which is not contained herein but is available upon request, concentrates on the technical grade of the active ingredient and identifies missing generic data. However, during the review of these data we are also looking for potential hazards that may be associated with the formulated (end-use) products that contain the active ingredient. If we find serious concerns, we will bring formulated products under the provisions of the Registration Standards program to the extent necessary to protect the public.

EPA has the authority under FIFRA §3(c)(2)(B) to require that certain registrants submit generic data that will answer our questions regarding the hazard that may result from the intended use of the pesticide under review. Further, §3(c)(2)(B) provides that these data are to be submitted by those registrants who do not qualify for the formulator's exemption [FIFRA §3(c)(2)(D)]. Normally, this means that the registrants who are responsible for filling the data gaps are the manufacturing-use product producers (basic

suppliers of the active ingredient). However, end-use producers will not qualify for the formulator's exemption if the source of their active ingredient: (1) is not registered with EPA, and/or (2) is produced by the registrant's firm, or a firm which has ownership in common with the registrant's firm. These end-use producers can qualify for the formulator's exemption if they change their source of supply to a registered source, provided the source does not share ownership in common with the registrant's firm. If the end-use product registrant decides to switch sources, a new Confidential Statement of Formula, EPA Form 8570-4, must be submitted to the appropriate Product Manager within 90 days of receipt of this Guidance Document. The chart on the following page shows what is generally required of those who do and do not qualify for the formulator's exemption in the Registration Standards program.

If you decide to request the Agency to discontinue the registration of any of your products subject to the reregistration requirements of this Guidance Document, please notify the Product Manager named in the cover letter, within 90 days from the receipt of this document, that you wish to voluntarily cancel the registration(s). If you decide to maintain your product registration(s), you must provide the information described in the following pages within the time-frames outlined. EPA will issue a notice of intent to cancel or suspend the registration of any currently registered product if you fail to comply with the requirements set forth in this Guidance Document.

This Guidance Document will be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because this situation is currently unresolved, EPA has decided to proceed with the requirements in this Guidance Document which do not relate to compliance with the §3(c)(1)(D) provisions and to supplement the Document with additional guidance when circumstances permit. Failure to comply with the provisions of the subsequent guidance will also result in issuance by EPA of an intent to cancel the affected product registration(s).

Registrants are reminded that §6(a)(2) of FIFRA requires you at any time to submit factual information raising concerns of possible unreasonable adverse effects of a pesticide. You should notify the Agency of interim results of studies in progress if those results show possible adverse effects.

PRODUCTS SUBJECT TO THE REGISTRATION STANDARDS PROGRAM	ACTION(S) REQUIRED TO MAINTAIN REGISTRATION
I. Products That Do Not Qualify For The Formulator's Exemption	
A. Single Active Ingredient Products*	These products must be reregistered. To obtain reregistration, labeling, packaging and data requirements must be satisfied in accordance with the Registration Standards Guidance Document.
B. Multiple Active Ingredient Products	These products will not be reregistered at this time. However, generic data required to continue the registration of the active ingredient under review, as described in the Registration Standards Guidance Document, will be required and some labeling precautions may also be required.
II. Products That Do Qualify For The Formulator's Exemption	Only when additional restrictions or labeling are needed to protect man or the environment will these products be subject to the Registration Standard requirements. Affected products will be dealt with in a variety of ways, including but not limited to the Label Improvement Program and special intent to cancel notices.

* End-use products of registrants who also produce a manufacturing-use product will not be required to be reregistered provided that registrant fulfills the requirements specified in the Guidance Document for manufacturing-use product(s). Such end-use products will be subject to the labeling changes required for products in "II" above. If there are no manufacturing-use products registered by any company end-use products will be required to be reregistered.

NOTE: If all registrants in "I" above fail to meet the requirements in I-A and B above, then the registrants in "II" lose their right to qualify for the formulator's exemption and become subject to the requirements in I-A and B.

I. Regulatory Position

A. Introduction

This chapter describes the regulatory position of the Environmental Protection Agency ("the Agency") on atrazine based on an evaluation of all registered manufacturinguse products (MUP's) containing atrazine as the sole active ingredient. Future requests for registrations of substantially similar products will be covered by this standard. Dissimilar products will require amendments to the standard. This document provides the rationale for the Agency's position and the criteria for registration. It also discusses labeling requirements and tolerances.

"Atrazine" is the accepted common name for the compound, 2-chloro-4ethylamino-6-isopropylamino-striazine, recognized by the American National Standards Institute. Other names used for atrazine include: AATREX®, AATRAM®, ATRATOL®, GESAPRIM (Canadian), and G-30027. The Chemical Abstracts Service (CAS) Registry number is 1912-24-9, EPA Shaughnessy number is 080803.

B. Use Profile

Atrazine is a triazine herbicide used for control of broadleaf and grassy weeds in corn, sorghum, rangeland, sugarcane, macadamia orchards, guava, pineapple, turf grass sod, conifer reforestation, Christmas tree plantations, grass in orchards, proso millet, ryegrass (perennial), wheat, grass seed fields and for nonselective vegetation control in chemical fallow, and non-crop land.

Atrazine is available as a technical material, at 99.9% active ingredient and as a manufacturing-use product containing 80% atrazine for formulation of wettable powders, pellets, granulars, flowable concentrates, emulsifiable concentrates, or tablets.

C. Regulatory Position

Based on review and evaluation of all available data and other relevant information on atrazine, the Agency has made the following determinations.

1. Manufacturing-use products containing atrazine as a sole active ingredient may be registered for sale, distribution, formulation and use in the United States, subject to the terms and conditions specified in this standard. Applicants having products not conforming to this standard must apply to amend the document so those products containing atrazine may be registered and reregistered under this standard.

2. Available data do not show that any of the risk criteria listed in Section 162.11(a) of Title 40 of the U.S. Code of Federal Regulations have been met or exceeded for the uses of atrazine specified in this standard.

3. Available toxicity data cited as supporting data for the registration of atrazine have been reviewed and the need for additional studies has been included in this standard.

4. The available environmental fate data on atrazine are insufficient to fully assess the chemical's environmental impact at this time.

When additional environmental fate data are submitted, a complete environmental exposure assessment can be made.

5. The available atrazine product chemistry data are insufficient to fully assess the chemical's characteristics at this time. The data gaps outlined in the product chemistry data tables are tests needed to adequately support the registration of an atrazine product.

6. Registrants must provide or agree to develop additional data, as specified in the tables attached to this standard, in order to maintain existing registrations or to permit new atrazine registrations.

7. Because atrazine is expected to leach into groundwater, atrazine products covered by this standard must bear the warning statement appearing in Section G below.

D. Regulatory Rationale

The Agency has determined the following:

1. Available data indicate that atrazine has a low order of acute toxicity (TOX CAT III). However, as stated above, there are data missing in several areas of concern and conclusions as to the safety of long term exposure to atrazine cannot be made at this time.

2. Data to support the establishment of reentry protection standards are not required because the Agency has determined, based on the use patterns and available toxicology data for Atrazine, that the criteria in §158.140 are not met.

3. The Agency has reason to be concerned about the potential for groundwater contamination by atrazine. Therefore, additional studies may be required in the future. These concerns are mitigated, at the present time, through the label statements required by this standard.

4. Publication of this standard provides a mechanism for identifying data needs and to permit registration under the standard. It also allows for the upgrading of labels during the period in which the required data are being developed. These data will be reviewed and evaluated when they are received and the Agency will determine at that time whether they will affect the registration(s) of atrazine.

E. Criteria For Registration Under This Standard

To be subject to this standard, products must meet the following conditions:

1. Contain atrazine as the sole active ingredient and,
2. Conform to the acute toxicity limits, product composition, and use pattern requirements listed in Section F of this document.

The applicant for registration or reregistration of products subject to this standard must comply with all terms and conditions described in it, including commitments to fill data gaps on a schedule agreed to by both this Agency and the applicant. Applicants for registration under this standard must follow the instructions contained in this standard and complete and submit the appropriate forms within the time specified.

F. Acceptable Ranges and Limits

1. Product Composition Standard

Technical grade products must contain at least 94 percent atrazine as the sole active ingredient with percent related compounds also stated. Each manufacturing-use product formulation proposed for registration must be fully described with an appropriate certification of limits. In addition, the active ingredient found in the manufacturing-use atrazine products must be substantially similar to that in currently registered technical products. Any manufacturing-use product not meeting these requirements will be considered a new product and will not be registrable under this standard.

2. Acute Toxicity Limits

The Agency will consider registration of technical grade and manufacturing-use products containing atrazine within acute toxicity category III, provided that the labeling of those products bears appropriate precautionary statements.

3. Use Patterns

To be registered under this standard, manufacturing-use products containing atrazine may be labeled for formulation only into end-use products for use as herbicides to control broadleaf and grassy weeds on corn, sorghum, sugarcane, pineapple, macadamia nuts, chemical fallow, rangeland, turf grass sod, conifer reforestation, Christmas tree plantations, grass seed fields, non-crop land, guava, grass in orchards, proso millet, ryegrass (perennial), wheat, and for nonselective vegetation control in noncrop land.

G. Required Labeling

All technical grade, manufacturing-use, and end-use products containing atrazine must bear appropriate labeling as specified in 40 CFR 162.10. Other portions of the guidance package contain specific information regarding label requirements.

In addition to the requirements stated in 40 CFR 162.10, the following information must appear on the labeling of technical and manufacturinguse products:

1. The labeling must list specific, currently registered crops that the product is intended to be used on after manufacture into an end-use product. Labels not listing specific crops will be considered to be for manufacture into end-use products for all registered use sites.

2. The label must bear the following groundwater contamination precaution: "Atrazine leaches readily and accepted label rates have been found to result in contamination of water supplies by way of groundwater. Therefore users are advised to avoid use of atrazine in well drained soils, particularly in areas having high groundwater tables."

3. Fish and Wildlife Labeling Requirement

End-Use - All crops - This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

Manufacturing-Use -This pesticide is toxic to aquatic invertebrates. Do not discharge into lakes, streams, ponds, or public water unless in accordance with an NPDES permit. For guidance contact your Regional Office of EPA.

H. Tolerance Reassessment

All plant tolerances should be expressed in terms of atrazine and its metabolites (2-amino-4-chloro-6-isopropylaminos-triazine, 2-amino-4-chloro-6-ethylamino-s-triazine and 2-chloro-4,6-diamino-striazine) not as atrazine only.

Animal metabolism studies are required to determine if tolerances for residues in animal products should be expressed in terms of atrazine and its metabolites. Changing the expression of the tolerance could

affect the TMRC but cannot be assessed until residue data including the metabolites are available. Toxicity studies submitted have not evaluated the plant metabolites of atrazine. The current Theoretical Maximum Residue Contribution figure for atrazine residues in the human diet is 0.0770 mg/day (assuming 1.5 kg diet). Present data are insufficient to determine an ADI.

II. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

A. This portion of the guidance document is a Notice issued under the authority of FIFRA Section 3(c)(2)(B) and describes, in table format, the data required for maintaining the registrability of each product. Additionally, a bibliography (Appendix II-1) is included that identifies that data considered as part of the data base supporting this standard. EPA has determined that additional generic data described in this Notice must be submitted to EPA for evaluation in order to maintain in effect the registration(s) of your product(s) identified as an attachment to the cover letter accompanying this guidance document. As required by FIFRA Section 3(c)(2)(B), you are required to take appropriate steps to comply with this Notice.

EPA may suspend the registration of each of those products unless, within the specified time, you have informed EPA how you will satisfy the requirements of this Notice. Any such suspension will remain in effect until you have complied with the terms of this Notice.

B. What Generic Data [1/] Must Be Submitted. You may ascertain which generic data you must submit by consulting Table A at the end of this chapter. That table shows all the generic data needed to evaluate the continued registrability of all products, and the dates by which the data must be submitted. The required data must be submitted and any necessary studies must be conducted in accordance with EPA-approved protocols, the Pesticide Registration Guidelines 2/, or data collected under the approved protocols of the Organization for Economic Cooperation and Development (OECD). If you wish not to develop data which are necessary to support the registration or reregistration of certain uses appearing in your labeling, you may delete those uses at the time you submit your revised labeling.

Also for certain kinds of testing (generally ecological effects), EPA requires the test substance to be a "typical formulation," and in those cases EPA needs data of that

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1/ Generic data pertain to the properties or effects of a particular ingredient, and thus are relevant to an evaluation of the risks of all products containing that ingredient (or all such products having a certain use pattern), regardless of any such product's unique composition or use. Product-specific data relate only to the properties or effects of a product with a particular composition (or a group of products with closely similar composition).

2/ The Pesticide Registration Guidelines were reproposed on November 24, 1982 in 47 Federal Register 53192.

type for each major formulation category (e.g., emulsifiable concentrates, wettable powders, granulars, etc.) These are classified as generic data and when needed are specified in Table A. EPA may possess data on certain "typical formulations" but not others. Note: The "typical formulation" data should not be confused with product-specific data (Table B) which are required on each formulation. Product-specific data are further explained in Chapter IV of this document.

C. Options Available for Complying With Requirements to Submit Data

Within 90 days of your receipt of this Notice you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" [EPA Form 8580-1, Appendix II-2] for each of your products. On that form you must state which of the following methods you will use to comply with the requirements of this Notice:

1. (a) Notify EPA that you will submit the data, and

   (b) either submit the existing data you believe will satisfy the requirement, or state that you will generate the data by conducting testing. If the test procedures you will use deviate from (or are not specified in) the Registration Guidelines or protocols contained in the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must enclose the protocols you will use.

2. Notify EPA that you have entered into an agreement with one or more other registrants to jointly develop (or share in the cost of developing) the data. If you elect this option, you must notify EPA which registrant(s) are parties to the agreement.

3. File with EPA a completed "Certification of Attempt to Enter Into an Agreement With Other Registrants for Development of Data" (EPA Form 8580-6, Appendix II-3)*/

4. Request that EPA amend your registration by deleting the uses for which the data are needed. (This option is not available to applicants for new products.)

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*/ FIFRA Section 3(c)(2)(B) authorizes joint development of data by two or more registrants, and provides a mechanism by which parties can obtain an arbitrator's decision if they agree to jointly develop data but fail to agree on all the terms of the agreement. The statute does not compel any registrant to agree to develop data jointly.
(Footnote continued at bottom of next page)

5. Request voluntary cancellation of the registration(s) of your products for which the data are needed. (This option is not available to applicants for new products.)

D. Procedures for Requesting Changes in Testing Methodology and Extensions of Time

EPA recognizes that you may disagree with our conclusions regarding the appropriate ways to develop the required data or how quickly the data must be submitted. If the test procedures you plan to use deviate from (or are not specified in) the registration guidelines or protocols contained in the reports of the Expert Groups to the Chemical Groups, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit the protocol for Agency review prior to the initiation of the test.

If you think that you will need more time to generate the required data than is allowed by EPA's schedule, you may submit a request for an extension of time. The extension request must be submitted in writing to the Product Manager. The extension request should state the reasons why you conclude that an extension is appropriate. While EPA considers your request, you must strive to meet the deadline for submitting the required data.

(Footnote continued from previous page)

In EPA's opinion, joint data development by all registrants who are subject to the requirements to submit a pertinent item of data or a cost-sharing agreement among all such registrants is clearly in the public interest. Duplication of testing could increase costs, tie up testing facilities, and subject an unnecessarily large number of animals to testing.

As noted earlier, EPA has discretion not to suspend the registration of a product when a registrant fails to submit data required under FIFRA Section 3(c)(2)(B). EPA has concluded that it is appropriate to exercise its discretion not to suspend in ways which will discourage duplicative testing. Accordingly, if (1) a registrant has informed us of his intent to develop and submit data required by this Notice; and (2) a second registrant informs EPA that it has made a bona fide offer to the first registrant to share in the expenses of the testing [on terms to be agreed upon or determined by arbitration under FIFRA Section 3(c)(2)(B)(iii)]; and (3) the first registrant has declined to agree to enter into a cost-sharing agreement, EPA will not suspend the second firm's registration. While the first firm is not required to agree to jointly develop data, EPA is not required to force the second firm to engage in economically inefficient duplicative testing in order to maintain its registration.

III. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Note: This chapter applies only to manufacturing-use products, not end-use products.

A necessary first step in determining which statements must appear on your product's label is the completion and submission to EPA of product-specific data* listed on the form entitled "Product Specific Data Report" (EPA Form 8580-4, Appendix III-1) to fill "gaps" identified by EPA concerning your product. Under the authority of FIFRA Section 3(c)(2)(B), EPA has determined that you must submit these data to EPA in order to register or reregister your product(s). All of these data must be submitted not later than six months after you receive this guidance document.

"Product-Specific Data Requirements for Manufacturing-Use Products" appearing in Table B permit you to determine which product-specific data you must submit. This can be done by examining the entries in the column of those tables entitled "Must Data Be Submitted Under §3(c)(2)(B)."

*/ Product specific data pertains to data that support the formulation which is marketed; it usually includes product chemistry data and acute toxicology data.

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 2/
§158.120 Product Chemistry				
Product Identity:				
61-1 - Identity of Ingredients	TGAI	Yes	4/	No
61-2 - Statement of Composition	TGAI	Partially	4/	Yes
61-3 - Discussion of Formation of Ingredients	TGAI	Partially	4/	Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis	TGAI	Partially	4/	Yes
62-2 - Certification of Limits	TGAI	Partially	4/	Yes
62-3 - Analytical Methods for Enforcement of Limits	TGAI	Partially	4/	Yes
Physical and Chemical Characteristics				
63-2 - Color	TGAI	Yes	4/	No
63-3 - Physical State	TGAI	Yes	4/	No
63-4 - Odor	TGAI	Yes	4/	No
63-5 - Melting Point	TGAI	Yes	4/	No
63-6 - Boiling Point	TGAI	N/A 5/	4/	No
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	Partially	4/	Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 2/
§158.120 Product Chemistry (continued)				
63- 8 - Solubility	TGAI OR PAI	Yes	4/	No
63- 9 - Vapor Pressure	PAI	Yes	4/	No
63-10 - Dissociation constant	PAI	Yes	4/	No
63-11 - Octanol/water partition coefficient	PAI	No	-	Yes
63-12 - pH	TGAI	Partially	4/	Yes
63-13 - Stability	TGAI	Yes	4/	No
63-14 - Oxidizing or Reducing Action	TGAI	N/A	-	No
63-15 - Flammability	TGAI	N/A	-	No
63-16 - Explosiveness	TGAI	N/A	-	No
63-17 - Storage Stability	TGAI	N/A	-	No
63-18 - Viscosity Coefficient	TGAI	N/A	-	No
63-19 - Miscibility	TGAI	N/A	-	No
63-20 - Corrosion Characteristics	TGAI	Partially	4/	Yes
Other Requirements:				
64-1 - Submittal of samples	Choice 6/	-	-	-

1/ Composition: TGAI = Technical grade of the active ingredient; PAI = Pure active ingredient; Choice = Choice of several test substances determined on a case-by-case basis.
2/ Data must be submitted no later than 6 months from date of issuance.
3/ Clarification of the density units is required.
4/ Product chemistry data citations are contained in confidential statements of formula numbers GS006251 through GS006279 of the attached Bibliography.
5/ NA = Not Applicable.
6/ Samples may be required on Agency request.

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 2/
§158.125 Residue Chemistry				
171-4 - Nature of Residue (Metabolism)				
- Plants	PAIRA	Yes	GS006201 GS006202 GS006203 0055672 0024474	No
- Livestock	PAIRA and plant metabolites	Partially3/	GS006204 GS002605 GS002606 00022857 00038297	Yes
171-4 - Residue Analytical Method				
- Plant residues	TGAI and plant metabolites	Partially	GS006210 GS006212 GS006213 GS006214 GS006215 GS006217 GS006218 00024480 00055644	Yes12/
- Animal residues	TGAI and metabolites	Partially	GS006208 GS006210	Yes13/
171-4 - Storage Stability Data	PAI	Yes	GS006207 GS006211	No

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 2/
§158.125 Residue Chemistry (continued)				
171-4 - Magnitude of the Residue-Residue Studies for Each Food Use				
Cereal Grain Group	EP	N/A		No 4/
Corn	EP	Partially	GS006221 GS006222	Yes 5/
Proso millet	EP	Partially	GS006223	Yes 6/
Sorghum grain	EP	Yes	GS006224	No
Wheat grain	EP	Partially	GS006225 GS006226	Yes 7/
Forage, fodder and straw, cereal grain group	EP	No		Yes 4/
Corn forage and fodder	EP	Partially	GS006227 GS006221 GS006222	Yes 7/
Proso millet forage, fodder and straw	EP	Partially	GS006223	Yes 7/
Sorghum forage and fodder	EP	Partially	GS006224	Yes 7/
Wheat fodder and straw	EP	Partially	GS006232	Yes 7/

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 2/
§158.125 Residue Chemistry (continued)				
171-4 - Magnitude of the Residue-Residue Studies (continued)				
Grass forage, fodder and hay group	EP	Partially	GS006233 GS006234	Yes 8/
Orchard grass forage, fodder and hay	EP	Partially	GS006233 GS006234	Yes 9/
Perennial ryegrass	EP	Partially	GS006235	Yes 7/
Range grasses	EP	Yes	GS006236	No
Tree nuts group	EP	Partially	GS006237	Yes 7/
Guava	EP	Partially	GS006238	Yes 7/
Pineapple forage, fodder, and fruit	EP	Partially	GS006239	Yes 7/
Sugarcane forage, fodder and cane	EP	Yes	GS006240 GS006241 GS006242 GS006243 00024480	No
—Processed Food/Feed	EP	NA	-	No

8/ A crop group tolerance is not appropriate at the present time (refer to footnote #7). The pregrazing intervals need to be established. Also data are required for orchardgrass forage, fodder, and hay.

9/ The data indicate that the 15 ppm tolerance is too high, we propose a 4 ppm tolerance for combined residues of atrazine and its metabolites, or data supporting the 15 ppm tolerance.

10/ Residue data for eggs and fat, meat, and meat by-products of poultry reflecting hen feeding studies at 0.2, 0.6 and 2 ppm (1X, 3X, and 10X the highest expected dietary intake of atrazine by poultry) are required.

11/ No registered uses indicated on product labeling.

12/ Suitable methods are required for enforcement of tolerances of atrazine metabolites G-28273, G-28279, and G-30033.

13/ An appropriate method for the enforcement of tolerances for eggs and the fat, meat, and meat by-products of cattle, goats, hogs, horses, poultry, and sheep is required, or validation data for tissues analyzed by the milk (GC) method (PP#7F0620).

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition[1]	Use Pattern[2]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)?
§158.130 Environmental Fate					
DEGRADATION STUDIES-LAB:					
161-1 - Hydrolysis	TGAI or PAIRA	A,B,G	No	-	Yes
Photodegradation					
161-2 - In water	TGAI or PAIRA	A,B,G	Yes	00024328	No
161-3 - On soil	TGAI or PAIRA	A,B,G	No	-	Yes
161-4 - In Air	TGAI or PAIRA	A,B,G	No	-	No
METABOLISM STUDIES-LAB:					
162-1 - Aerobic Soil	TGAI or PAIRA	A,B,G	Partially[4]	00027870 00040663 00040664	Yes
162-2 - Anaerobic Soil	TGAI or PAIRA	-	No	-	No[8]
162-3 - Anaerobic Aquatic	TGAI or PAIRA	A,G	No	-	Yes
162-4 - Aerobic Aquatic	TGAI or PAIRA	-	N/A[5]	-	No
MOBILITY STUDIES:					
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA	A,B,G	Partially[4]	00027134 00027135 00027139 00027140 00044017	Yes
163-2 - Volatility (Lab)	TEP	-	N/A[5]	-	No
163-3 - Volatility (Field)	TEP	-	N/A[5]	-	No

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition[1/]	Use Pattern[2/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)?
§158.130 Environmental Fate (continued)					
DEGRADATION STUDIES-FIELD:					
164-1 - Soil	TEP	A,B,G,	No	-	Yes
164-2 - Aquatic (Sediment)	TEP	-	N/A[5/]	-	No
164-3 - Forestry	TEP	G	No	-	Yes
164-4 - Combination and Tank Mixes	-		N/A[5/]	-	No
164-5 - Soil, Long-term	TEP	A,B	No	-	Yes[6/]
ACCUMULATION STUDIES:					
165-1 - Rotational Crops (Confined)	PAIRA	A,B	No	-	Yes
165-2 - Rotational Crops (Field)	TEP	A,B	No	-	Yes[7/]
165-3 - Irrigated Crops	TEP	-	N/A[5/]	-	No
165-4 - In Fish	TGAI or PAIRA	A,B,G	No	-	Yes
165-5 - In Aquatic Non-Target Organisms	TEP	A,B,G	No	-	Yes

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA - Pure active ingredient, radiolabelled; TEP = Typical end-use product.

2/ The use patterns are coded as follows: A = Terrestrial, Food Crop; B = Terrestrial, Non-Food; C = Aquatic, Food Crop; D = Aquatic, Non-Food; E = Greenhouse, Food Crop; F = Greenhouse, Non-Food; G = Forestry; H = Domestic Outdoor; I = Indoor.

3/ Data must be submitted no later than 48 months from date of issuance.
4/ See page 22 attached for detailed description.
5/ NA = Not applicable at present time based on currently available studies.
6/ Depending upon results of short-term studies from Sec. 164-1.
7/ Depending upon results of confined rotational crop studies from Sec. 165-1.
8/ Anaerobic soil not needed if anaerobic aquatic data will be provided.

The following studies partially fulfilled data requirements as indicated:

00027870: Degradates in sandy loam, silty clay loam, and silt loam.

00040663: Degradates in 4 volcanic soils; half-life of atrazine in a volcanic soil.

00040664 Degradates in sandy loam

00027139 and 00027140: Mobility of unaged atrazine in gravelly sand, sandy loam, silty clay loam.

00027135: Mobility of unaged atrazine in sandy loam and silt loam.

00044017: Mobility of unaged atrazine in 14 soils; data on mobility of degradate hydroxyatrazine in sandy loam and silty clay loam.

00027134: Adsorption/desorption of unaged atrazine in 25 soils.

Other data requirements that have not been met:

1. Data on half-life of atrazine degradates and of atrazine in a representative continental U. S. soil are required.

2. Data on mobility of aged atrazine in soils are required.

GENERIC DATA REQUIREMENTS

Guideline Citation	Data Requirements	Composition and Use Pattern[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [3]
71-1	Avian Single-Dose LD50	Technical A,B,G	Yes	00024721[4], 00024722[5], GS006281[5]	No
71-2	Avian Dietary LC50				
	a. Upland game	Technical A,B,G	Yes	00022923[4], 00024723[5], 00059214[5]	No
	b. Waterfowl	Technical A,B,G	Yes	00022923[4], 00059214[5]	No
71-3	Wild Mammal	-	N/A[3]	-	No
71-4	Avian Reproduction	-	N/A[3]	-	No
71-5	Simulated and Actual Field Testing for Mammals & Birds	-	N/A[3]	-	No
72-1	Fish Acute LC_{50}				
	a. Warmwater	Technical A,B,G	Yes	00024377[5], 00024717[4]	No
	b. Coldwater	Technical A,B,G	Yes	00024377[5], 00024716[4]	No
72-2	Acute LC50 Aquatic Invertebrates	Technical A,B,G	Yes	00024377[5], 00027204[4]	No
72-3	Acute LC50 Estuarine + Marine Organisms				
	a. Oyster	Technical A,B	Yes	00024720[5], 00031858[5]	No
	b. Shrimp	Technical A,B	Yes	00024395[5], 00027419[5], 00031858[5]	No
	c. Fish	Technical A,B	Yes	00031858[5]	No

GENERIC DATA REQUIREMENTS

Guideline Citation	Data Requirements	Composition and Use Pattern[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [3]
(Continued)					
72-4	Fish Early Life-Stage Aquatic Invertebrate Life Cycle[3]				
	a. Invertebrate	Technical A,B,G	Yes	00024377[4]	No
	b. Fish	Technical A,B,G	Yes	00024377[4]	No
72-5	Fish Life-Cycle		N/A[3]		No
72-6	Aquatic Organism		N/A[3]		No
72-7	Accumulation Simulated or Actual Field Testing for Aquatic Organisms		N/A[3]		No

1/ Composition of the material to be tested is technical grade unless otherwise specified in footnotes. The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

2/ Data must be submitted no later than 48 months from date of issuance.

3/ Not applicable at this time.

4/ Study on its own fulfills Guideline requirements.

5/ Study must be combined with other studies to fulfill Guidelines.

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.135 Toxicology					
ACUTE TESTING:					
81-1 - Oral LD50 - Rat	TGAI	A,B,G	Yes	00024706, 00024727 00027097	No
81-2 - Dermal LD50	TGAI	A,B,G	Yes	GS006201, 00027097	No
81-3 - Inhalation LC50 - Rat	TGAI	A,B,G	Yes	GS006201	No
81-4 - Primary Eye Irritation Rabbit	TGAI	A,B,G	Yes	GS006201	No
81-5 - Primary Dermal Irritation Rabbit	TGAI	A,B,G	Yes	00027096	No
81-7 - Acute Delayed Neurotoxicity - Hen	TGAI	-	No	-	No
SUBCHRONIC TESTING:					
82-1 - 90-Day Feeding - Rodent, Non-rodent	TGAI	-	N/A	-	No
82-2 - 21-Day Dermal	TGAI	-	N/A	-	No
82-3 - 90-Day Dermal	TGAI	-	N/A	-	No
82-4 - 90-Day Inhalation - Rat	TGAI	-	N/A	-	No
82-5 - 90-Day Neurotoxicity- Hen/Mammal	TGAI	-	N/A	-	No

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.135 Toxicology (continued)					
CHRONIC TESTING:					
83-1 - Chronic Toxicity - 2 species: Rodent and Non-rodent	TGAI	A,B,G	Rodent-Partially Non-Rodent-Partially	00024727 00059213	Yes 4/ Yes 8/
83-2 - Oncogenicity Study - 2 species: Rat and Mouse preferred	TGAI	A,B,G	Rat-Partially Mouse-No	00059211 none	Yes 4/ 9/ Yes 4/ 9/
83-3 - Teratogenicity - 2-generation	TGAI	A,B,G	Mouse-Partially Rat-Yes	00023558 00038041	Yes 7/ 9/ No
83-4 - Reproduction, 2-generation	TGAI	A,B,G	Rat-Partially	00024471	Yes 8/ No
MUTAGENICITY TESTING					
84-2 - Gene Mutation	TGAI	A,B,G	Ames-Partially	00060642	Yes 5/
84-2 - Chromosomal Aberration	TGAI	A,B,G	No	-	Yes
84-2 - Other Mechanisms of Mutagenicity	TGAI	A,B,G	No	-	Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Use Pattern 2/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
SPECIAL TESTING (Continued)					
85-1 - General Metabolism	PAI or PAIRA	A,B,G	Partially	6080632 6080634	Yes 6/
85-2 - Domestic Animal Safety	Choice	A,B,G	No	-	No

1/ Composition: PAI = Pure active ingredient; PAIRA = Pure active ingredient, radiolabelled; TGAI = Technical grade active ingredient; Choice = Choice of several test substances determined on a case-by-case basis.
2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.
3/ Data must be submitted no later than 6 months for acutes, 48 months for remainder from date of issuance.
4/ New studies have been submitted, but have not been included in this document because they have not been reviewed.
5/ Additional mutagenicity studies other than Ames listed in Reg. 158.
6/ Data indicating the metabolites formed.
7/ A new non-rodent species (rabbit, lagomorph) is needed meet the data requirements.
8/ A new study is required to be done in accordance with more recent guidelines.
9/ The dates listed in footnote 3 above do not supersede any commitments previously made under the Data Call-in Program.

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.135 Toxicology (continued)					
CHRONIC TESTING:					
83-1 - Chronic Toxicity - 2 species: Rodent and Non-rodent	TGAI	A,B,G	Rodent-Partially Non-Rodent-Partia	00059211 00059213	Yes4/ Yes8/
83-2 - Oncogenicity Study - 2 species: Rat and Mouse preferred	TGAI	A,B,G	Rat-Partially Mouse-No	00059211 None	Yes4/9/ Yes4/9/
83-3 - Teratogenicity - 2-generation	TGAI	A,B,G	Mouse-Partially Rat-Yes	00023558 00038041	Yes7/9/ No
83-4 - Reproduction, 2-generation	TGAI	A,B,G	Rat-Partially	00024471	Yes8/
MUTAGENICITY TESTING					
84-2 - Gene Mutation	TGAI	A,B,G	Ames-Partially	00060642	Yes5/
84-2 - Chromosomal Aberration	TGAI	A,B,G	No	-	Yes
84-2 - Other Mechanisms of Mutagenicity	TGAI	A,B,G	No	-	Yes
SPECIAL TESTING					
85-1 - General Metabolism	PAI or PAIRA	A,B,G	Partially	6080632 6080634	Yes6/
85-2 - Domestic Animal Safety	Choice	A,B,G	No	-	No

1/ Composition: PAI = Pure active ingredient; PAIRA = Pure active ingredient, radiolabelled; TGAI = Technical grade active ingredient; Choice = Choice of several test substances determined on a case-by-case basis.
2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.
3/ Data must be submitted no later than 6 months for acutes, 48 months for remainder from date of issuance.
4/ New studies have been submitted, but have not been included in this document because they have not been reviewed.
5/ Additional mutagenicity studies other than Ames listed in Reg. 158.
6/ Data indicating the metabolites formed.
7/ A new non-rodent species (rabbit, lagomorph) is needed meet the data requirements.
8/ A new study is required to be done in accordance with more recent guidelines.
9/ The dates listed in footnote 3 above do not supersede any commitments previously made under the Data Call-in Program.

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition[1]	Use Pattern[2]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [3]
§158.155 Nontarget Insect					
NONTARGET INSECT TESTING -					
POLLINATORS:					
141-1 - Honey bee acute contact LD50	TGAI	A,B	Yes	00036935	No
141-2 - Honey bee - toxicity of residues on foliage	TEP		No		No[4]
141-3 - Wild bees important in alfalfa pollination - toxicity of residues on foliage	TEP		No		No[4]
141-4 - Honey bee subacute feeding study	(Reserved)[5]		-		-
141-5 - Field testing for pollinators	TEP		No		No[4]
NONTARGET INSECT TESTING -					
AQUATIC INSECTS:					
142-1 - Acute toxicity to aquatic insects	(Reserved)[5]		-		-
142-2 - Acute insect life-cycle study	(Reserved)[5]		-		-

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
(Continued)					
142-3 - Simulated or actual field testing for aquatic insects	(Reserved) 5/		-		-
143-1 - NONTARGET INSECT TESTING - PREDATORS AND PARASITES thru					
143-3	(Reserved) 5/		-		-

1/ Composition: TGAI = Technical grade of the active ingredient; TEP = Typical end-use product.
2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.
3/ Data must be submitted no later than 48 months from date of issuance.
4/ 141-2, 141-3, 141-5, are not required due to demonstrated low toxicity to bees.
5/ Reserved based on current study demonstrating a low toxicity to insects.

TABLE A
GENERIC DATA REQUIREMENTS FOR ATRAZINE

Data Requirement	Composition[1/]	Use[2/] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [3/]
§158.150 Plant Protection					
121-1 - TARGET AREA PHYTOTOXICITY	EP	-	[4/]	-	No
NONTARGET AREA PHYTOTOXICITY					
TIER I					
122-1 - Seed Germination/ Seedling Emergence	TGAI	-	[4/]	-	No
122-1 - Vegetative Vigor	TGAI	-	[4/]	-	No
122-2 - Aquatic Plant Growth	TGAI	-	[4/]	-	No
TIER II					
123-1 - Seed Germination/ Seedling Emergence	TGAI	-	[4/]	-	No
123-1 - Vegetative Vigor	TGAI	-	[4/]	-	No
123-2 - Aquatic Plant Growth	TGAI	-	[4/]	-	No
TIER III					
124-1 - Terrestrial Field	TEP	-	[4/]	-	No
124-2 - Aquatic Field	TEP	-	[4/]	-	No

1/ Composition: TGAI = Technical grade of the active ingredient; TEP = Typical end-use product. EP = End-use product.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

3/ Data must be submitted no later than 48 months from date of issuance.

4/ These requirements are generally waived unless it is believed there is a phytotoxicity problem (See Registration Standard Policy Note #34).

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ATRAZINE

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [2]
§158.120 Product Chemistry				
Product Identity [4]				
61-1 - Identity of Ingredients	MP	Yes	[4]	No
61-2 - Statement of Composition	MP	Partially	[4]	Yes
61-3 - Discussion of Formation of Ingredients	MP	Partially	[4]	Yes
Analysis and Certification of Product Ingredients:				
62-1 - Preliminary Analysis	MP	Partially	[4]	Yes
62-2 - Certification of Limits	MP	Partially	[4]	Yes
62-3 - Analytical Methods for Enforcement of Limits	MP	Partially	[4]	Yes
Physical and Chemical Characteristics				
63-2 - Color	MP	No	-	Yes
63-3 - Physical State	MP	Yes	[4]	No
63-4 - Odor	MP	No	-	Yes
63-5 - Melting Point	MP	N/A	-	No

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ATRAZINE

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [2]
§158.120 Product Chemistry (continued)				
63-6 - Boiling Point	MP	N/A	-	No
63-7 - Density, bulk density, or specific gravity	MP	Partially[3]	[4]	Yes
63-12 - pH	MP	Partially	[4]	Yes
63-14 - Oxidizing or reducing action	MP	Partially	[4]	Yes
63-15 - Flammability	MP	Partially	[4]	Yes
63-16 - Explodability	MP	Partially	[4]	Yes
63-17 - Storage Stability	MP	Partially	[4]	Yes
63-18 - Viscosity	MP	No	-	Yes[6]
63-19 - Miscibility	MP	No	-	Yes[7]
Other Requirements				
64- 1 - Submittal of Samples	Choice[5]	-	-	-

1/ Composition: MP = Manufacturing-use product; Choice = Choice of several test substances determined on a case-by-case basis.
2/ Data must be submitted no later than 6 months from date of issuance.
3/ Clarification of the density units is required.
4/ Product chemistry citations are contained in Confidential Statements of Formula numbers GS006251 through GS006279 of the attached bibliography.
5/ Upon Agency request.
6/ Only viscosity coefficient for 43% Formulated Intermediate (FI) is needed. All other FI's are solids.
7/ Only miscibility for the 43% FI is needed. All other FI's are solids.

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ATRAZINE

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)? [2]
§158.135 Toxicology				
ACUTE TESTING				
81-1 - Oral LD50 - Rat	MP	Yes	00024706,00024727 00027079	No
81-2 - Dermal LD50	MP	Yes	GS006201,GS0006228 00027097	No
81-3 - Inhalation LC50	MP	Yes	GS0006201,GS006228	No
81-4 - Primary Eye Irritation - Rabbit	MP	Yes	GS006201,GS006228	No
81-5 - Primary Dermal Irritation	MP	Yes	00027096	No
81-6 - Dermal Sensitization	MP	N/A	-	No

1/ Composition: MP = Manufacturing-use product.

IV. SUBMISSION OF REVISED LABELING AND PACKAGING INFORMATION

Note: This chapter applies only to manufacturing-use products, not end-use products.

The Agency requires applicants for registration or reregistration to ensure that each label (1) contains accurate, complete, and sufficient instructions and precautions, reflecting the results of data concerning the product and its ingredients, and (2) incorporates labeling format and terminology which are sufficiently standardized to avoid user confusion.

As part of your application, you will be required to submit draft labeling consistent with: applicable product-specific data; the precautionary statements and use directions; and the regulations concerning classification [40 CFR §162.11(c)], packaging [40 CFR §162.16], and labeling [40 CFR §162.10], as indicated by the following paragraphs of this chapter of the guidance document.

You will be informed later when you must submit the revised labeling set forth in this guidance package.

A. Label Contents

40 CFR §162.10 requires that certain specific labeling statements must appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to Tables D, E, and F (Appendix IV-2).

Item 1. PRODUCT NAME - The name, brand, or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading. [40 CFR §162.10(b)]

Item 2. COMPANY NAME AND ADDRESS - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text. [40 CFR §162.10(c)]

Item 3. NET CONTENTS - A net content statement is required on all labels. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be stated in terms of weight, expressed as avoirdupois pounds

and ounces, and stated in terms of the largest suitable unit, i.e., "1 pound 10 ounces" rather than "26 ounces." In addition to the required units specified, net contents may be expressed in metric units. [40 CFR §162.10(d)]

Item 4. EPA REGISTRATION NUMBER - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. [40 CFR §162.10(e)]

Item 5. EPA ESTABLISHMENT NUMBER - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container. [40 CFR §162.10(f)]

Item 6. INGREDIENT STATEMENT - An ingredient statement is required on the front panel and must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredient statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. [40 CFR 162.10(g)]

Item 6A. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - All labels are required to have precautionary statements grouped together on the front panel, preferably within a block outline. The table below shows the minimum type size requirements on various size labels, as set forth in the Regulations.

Size of Label on Front Panel in Square Inches	Signal Word as Required Minimum Type Size All Capitals	"Keep Out of Reach of Children" as Required
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - All labels are required to have the statement "Keep Out of Reach of Children" located on the front panel above the signal word except where contact with children during distribution or use is unlikely. [40 CFR §162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (Caution, Warning, or Danger) is required on the front panel immediately below the child hazard warning statement. [40 CFR §162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, inhalation, or dermal toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word poison. [40 CFR §162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. [40 CFR §162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. [40 CFR §162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements as listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. [40 CFR §162.10 (h)(2)]

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions taken to avoid accident, injury or damage. [40 CFR §162.10 (h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. [40 CFR §162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD

1. Flammability statement. Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in Appendix IV-3. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

2. Criteria for declaration of non-flammability. The following criteria will be used to determine if a product is non-flammable:

   a. A "non-flammable gas" is a gas (or mixture of gases) that will not ignite when a lighted match is placed against the open cylinder valve.

   b. A "non-flammable liquid" is one having a flashpoint greater than 350°F (177°C) as determined by the method specified in 40 CFR §163.61-8(c)(13)(ii) of Subpart D.

   c. A "non-flammable aerosol" is one which meets the following criteria:

      i. The flame extension is zero inches, using the method specified in 40 CFR §163.61-8(c)(13)(ii);

      ii. There is no flash back; and

      iii. The flashpoint of the non-volatile liquid component is greater than 350°F (177°C), determined by the method specified in 40 CFR §163.61-8(c)(13)(i).

3. Declaration of non-flammability. Products which meet the criteria for non-flammability specified above may bear the notation "non-flammable" or "nonflammable (gas, liquid, etc.)" on the label.

   It may appear as a substatement to the ingredients statement, or on a back or side panel, but shall not be highlighted or emphasized (as with an inordinately large type size) in any way that may detract from precaution.

4. Other physical/chemical hazard statements. When chemistry data submitted in accordance with 40 CFR §163.61-10(c) demonstrate hazards of a physical or chemical nature other than flammability, appropriate statements of hazard will be prescribed. Such statements may address hazards of explosivity, oxidizing or reducing capability, or mixing with other substances to produce toxic fumes.

Item 9. MISUSE STATEMENT - The following statement is required on your label: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." [40 CFR §162.10(1)(2)(ii)]

Item 10A. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. Make certain that the statement you use pertains specifically to your product. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix IV-5 for the latest specific storage and disposal product label statements.

Item 10B. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment. [40 CFR §162.10]

B. Collateral Information

Bulletins, leaflets, circulars, brochures, data sheets, flyers, and other graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

V. INSTRUCTIONS FOR SUBMISSION

All applications prepared in response to this Notice should be addressed as follows:

Robert J. Taylor, Product Manager 25
Phone No. (703) 557-1800
Registration Division (TS-767)
Office of Pesticide Programs
Environmental Protection Agency
Washington, D.C. 20460

For each product for which continued registration is desired:

1. Within 90 days from receipt of this document, you must submit the "FIFRA Section 3(c)(2)(B) Summary Sheet" EPA Form 8580-1. Refer to Appendix II-2 with appropriate attachments.

2. Within 6 months from receipt of this document registrants must submit:

   a. Confidential Statement of Formula, EPA Form 8570-4.

   b. Product Specific Data Report, EPA Form 8580-4 (Appendix III-1).

   c. Two copies of any required product-specific data.

3. Within the time set forth in Table A, all generic data must be submitted by the affected registrant(s).

Note: If for any reason any required test is delayed or aborted so that meeting the agreed submission time will be delayed, notify the Product Manager listed above.

You will be informed at a later date when you must submit your Application for Amended Pesticide Registration (EPA Form 8570-1) and the revised labeling set forth in this guidance package.

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OMB Approval No. 2000-0468 (Expires 12-31-83)

FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET

EPA REGISTRATION NO.

PRODUCT NAME

APPLICANT'S NAME

DATE GUIDANCE DOCUMENT ISSUED

With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:

☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:

☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:

NAME OF OTHER REGISTRANT

☐ 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:

☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):

☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)

REGISTRANT'S AUTHORIZED REPRESENTATIVE	SIGNATURE	DATE

EPA Form 8580-1 (10-82)

PRODUCT SPECIFIC DATA REPORT

EPA Registration No._____ Guidance Document for_____

Date_____

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID#	Submitting Data (Attached)	
§158.20 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk-density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				

63-20	Corrosion characteristics				
63-21	Dielectric breakdown voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral LD-50, rat				
81-2	Acute dermal LD-50				
81-3	Acute inhalation, LC-50 rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitization				

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED (REFER TO THE SAMPLE LABELS FOLLOWING)

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by. . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Est. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Reg. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	Note type size requirements.
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & cross-bones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of practical treatment	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9C	Misuse statement	All products	Immediately following statement of classification or ahead of directions for use		
10A	Re-entry statement	All cholinesterase inhibitors	In the directions for use	Immediately after misuse statement	
10C	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from from other directions for use.
10D U.S.	Directions for use	All products	None	None	May be in metric as well as U.S. units

PHYSICAL-CHEMICAL HAZARDS

Criteria	Required Label Statement
I. Pressurized Containers	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.	Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
C. ALL OTHER PRESSURIZED CONTAINERS	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
II. Non-Pressurized Containers	
A. Flashpoint at or below 20°F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
B. Flashpoint above 20°F and over 80°F.	Flammable. Keep away from heat and open flame.
C. Flashpoint over 80°F and not over 150°F.	Do not use or store near heat and open flame.
D. Flashpoint above 150°F.	None required.

PHYSICAL-CHEMICAL HAZARDS

Criteria	Required Label Statement
I. Pressurized Containers	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temper

STORAGE AND DISPOSAL INSTRUCTIONS FOR PESTICIDES

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL." The STORAGE AND DISPOSAL heading must appear in the minimum type size listed below:

Size of label front panel in square inches	Required type size for the heading STORAGE AND DISPOSAL (all capitals)
10 and under	.6 point
Above 10 to 15	.8 point
Above 15 to 30	10 point
Over 30	12 point

Storage and disposal instructions must be set apart and clearly distinguishable from other directions for use. Blocking storage and disposal statements with a solid line is suggested as a means of increasing their prominence.

A. Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.

2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.

3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.

4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.

5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.

6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

B. Pesticide Disposal Instructions:

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."
2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients appearing on the "Acutely Hazardous" Commercial Pesticide Products List (RCRA "E" List) at the end of this appendix or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

"Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

The labels of all products, except those intended for domestic use, containing active or inert ingredients that appear on the "Toxic" Commercial Pesticide Products List (RCRA "F" List) at the end of this appendix or presently meet any of the criteria in Subpart C, 40 CFR 261 for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

3. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

C. Container Disposal Instructions

The label of each product must bear container disposal instructions appropriate to the type of container.

1. All products intended for domestic use must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. The labels for all other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

Container Type	Statement
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused[1], dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording).

[1]Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

2. The labels for all other products must bear container disposal instructions, based on container type, listed on the first page of this Appendix.

Pesticides that are hazardous wastes under 40 CFR 261.33(e) and (f) when discarded.

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)
Active Ingredients, (no inerts):

Acrolein
Aldicarb
Aldrin
Allyl alcohol
Aluminum phosphide
4-Aminopyridine
Arsenic acid
Arsenic pentoxide
Arsenic trioxide
Calcium cyanide
Carbon disulfide
p-Chloroaniline
Cyanides (soluble cyanide salts, not specified elsewere)
Cyanogen chloride
2-Cyclohexyl-4,6-dinitrophenol
Dieldrin
0,0-Diethyl S-[2-ethylthio)ethyl] phosphorodithioate
(disulfoton, Di-Syston)
0,0-Diethyl 0-pyrazinyl phosphorothioate (Zinophos)
Dimethoate
0,0-Dimethyl 0-p-nitrophenyl phosphorothioate (methyl parathion)
4,6-Dinitro-o-cresol and salts
4,6-Dinitro-o-cyclohexylphenol
2,4 Dinitrophenol
Dinoseb
Endosulfan
Endothall
Endrin
Famphur
Fluoroacetamide
Heptachlor
Hexanethyl tetraphosphate
Hydrocyanic acid
Hydrogen cyanide
Methomyl
alpha-Naphthylthiourea (ANTU)
Nicotine and salts
Octamethylpyrophosphoramide (OMPA, schradan)
Parathion

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)
Active Ingredients continued:

Phenylmercuric acetate (PMA)
Phorate
Potassium cyanide
Propargyl alcohol
Sodium azide
Sodium cyanide
Sodium fluoroacetate
Strychnine and salts
0,0,0,0-Tetraethyl dithiopyrophosphate (sulfotepp)
Tetraethyl pyrophosphate
Thallium sulfate
Thiofanox
Toxaphene
Warfarin
Zinc phosphide

There are currently no inert ingredients for commercial pesticides on the "Acutely Hazardous" List (RCRA "E" List).

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Active Ingredients:

Acetone
Acrylonitrile
Amitrole
Benzene
Bis(2-ethylhexyl)pthalate
Cacodylic acid
Carbon tetrachloride
Chloral (hydrate)
Chlordane (technical)
Chlorobenzene
4-Chloro-m-cresol
Chloroform
o-Chlorophenol
4-Chloro-o-toluidine hydrochloride
Creosote
Cresylic acid
Cyclohexane
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one
(kepone, chlordecone)
1,2-Dibromo-3-chloropropane (DBCP)
Dibutyl phthalate
S-3,3-(Dichloroallyl diisopropylthiocarbamate (diallate, Avadex)
o-Dichlorobenzene
p-Dichlorobenzene
Dichlorodifluoromethane (Freon 12®)
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide (pronamide,Kerb)
Dichloro diphenyl dichloroethane (DDD)
Dichloro diphenyl trichloroethane (DDT)
Dichlorethyl ether
2,4-Dichlorophenoxyacetic, esters and salts (2,4-D)
1,2-Dichloropropane
1,3-Dichloropropane (Telone)
Dimethyl phthalate
Ethyl acetate
Ethyl 4,4'-dichlorobenzilate (chlorobenzilate)
Ethylene dibromide (EDB)
Ethylene dichloride
Ethylene oxide
Formaldehyde
Furfural
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloroethane
Hydrofluoric acid

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Active Ingredients:

Isobutyl alcohol
Lead acetate
Lindane
Maleic hydrazide
Mercury
Methyl alcohol
Methyl bromide
Methyl chloride
2,2'-Methylenebis (3,4,6-trichlorophenol) (hexachlorophene)
Methylene chloride
Methyl ethyl ketone
4-Methyl-2-pentanone (methyl isobutyl ketone)
Naphthalene
Nitrobenzene
p-Nitrophenol
Pentachloroethane
Pentachloronitrobenzene (PCNB)
Pentaclorophenol
Phenol
Phosphorodithioic acid, 0,0-diethyl, methyl ester
Propylene dichloride
Pyridine
Resorcinol
Safrole
Selenium disulfide
Silvex
1,2,4,5-Tetrachlorobenzene
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
2,3,4,6-Tetrachlorophenol
Thiram
Toluene
1,1,1-Trichloroethane
Trichloroethylene
Trichloromonofluoromethane (Freon 11®)
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
Xylene

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Inert Ingredients:

Acetone
Acetonitrile
Acetophenone
Acrylic acid
Aniline
Benzene
Chlorobenzene
Chloroform
Cyclohexane
Cyclohexanone
Dichlorodifluoromethane (Freon 12®)
Diethyl phthalate
Dimethylamine
Dimethyl phthalate
1,4-Dioxane
Ethylene oxide
Formaldehyde
Formic acid
Isobutyl alcohol
Meleic anhydride
Methyl alcohol (methanol)
Methyl ethyl ketone
Methyl methacrylate
Naphthalene
Saccharin and salts
Thiourea
Toluene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichlorofluoromethane (Freon 11®)
Vinyl chloride
Xylene

SUMMARY OF EPA's DECISION ON RESPONSES FROM REGISTRANTS TO THE DATA CALL IN LETTER

Pesticide Chemical: Atrazine

Date of the Data Call In Letter: July 26, 1982

Company Name & Registration Numbers	End Use Exemptions received by EPA	End Use Exemptions granted by EPA	Voluntary Terminations[1] received by EPA	Voluntary Terminations[1] being processed	Comments & Decisions
Ciba Geigy Corp.					
100-439					Company has made a commitment to conduct studies requested by Notice.
100-447			x	x	
100-475					"
100-492			x	x	
100-497					"
100-503					"
100-513					"
100-519					"
100-521					"
100-529					"
100-535					"
100-572					"
100-581					"
100-585					"
100-590					"
100-4261			x	x	
100-4263			x	x	
100-4274			x	x	
100-4275			x	x	
100-4284			x	x	
100-4285			x	x	
100-4286			x	x	
100-4290					"
100-4306			x	x	
100-4308			x	x	
100-4309			x	x	
100-7441			x	x	
100-9218			x	x	

1/ Voluntary termination by registrant of all uses of their product(s). Characteristically, this category represents decisions previously made by the registrant and this action represents a formal updating of the Agency's file on the products to reflect past decisions.

2/ Conditioned on receiving complete documentation.

3/ Product was previously omitted from product search listing, added by company registrant.

* A functional equivalent of an end-use exemption(s) is granted because this is a state registration of an end-use product.

Company Name & Registration Numbers	End Use Exemptions received by EPA	End Use Exemptions granted by EPA	Voluntary Terminations[1] received by EPA	Voluntary Terminations[1] being processed	Comments & Decisions
Thompson-Hayward Chemical Company					
148-1173					Registration has been transferred to Uniroyal Registration no. 400.
148-1214					"
148-1215					"
148-1216					"
Shell Chemical Company					
201-397					Registration has been transferred to Helena Chem. Co. Registration no. 5905.
201-398					"
201-399					Registration has been transferred to Vertac Chem. Co. Registration no. 39511.
201-403					Offer to share cost of conducting required studies with the Atrazine Task force accepted.
201-408					"
201-409					"
201-410					"
201-411					"
201-413					"
Chevron Chemical Company					
239-2348	x	x			
Union Carbide Agricultural Products Co., Inc.					
264-172	x	x			
264-210	x	x			
264-253			x	x	
Uniroyal Chemical					
					Registrations were transferred from Thompson-Hayward Registration no. 148.
400-367	x	x			
400-372	x	x			
400-373					Notice of Intent to Suspend deferred to Registration Standard.
400-374					"

Company Name & Registration Numbers	End Use Exemptions		Voluntary Terminations[1]		Comments & Decisions
	re-ceived by EPA	grant-ed by EPA	re-ceived by EPA	being process-ed	
Dow Chemical USA					
464-484			x	x	
Stauffer Chemical Company					
476-2024	x	x			
476-2103	x	x			
476-2105	x	x			
476-2208	x	x 3/			
476-2212	x	x 3/			
476-2213	x	x 3/			
Monsanto Company					
524-286	x	x			
524-303			x	x	
524-304	x	x			
524-328	x	x 3/			
524-329	x	x			
524-10286			x	x	
524-10304			x	x	
524-10306			x	x	
524-10307			x	x	
524-10479			x	x	
Scott OM & Sons Company					
538-18	x	x			
538-157	x	x			
538-163	x	x			
Estech, Inc.					
557-1763	x	x			
557-1863	x	x			
557-1945	x	x			
Haviland Agricultural Chemical Company					
595-268			x	x	

Company Name & Registration Numbers	End Use Exemptions		Voluntary Terminations[1]		Comments & Decisions
	re-ceived by EPA	grant-ed by EPA	re-ceived by EPA	being process-ed	
Woolfolk Chemical Works, Inc.					
769-469	x	x			
769-481	x	x			
769-482	x	x			
Lebanon Chemical Corp.					
961-323	x	x			
Chapman Chemical Company					
1022-421			x	x	
Universal Cooperatives, Inc.					
1386-493	x	x			
Griffin Corporation					
1812-239	x	x			
1812-240	x	x			
1812-253	x	x			
1812-267	x	x 3/			
1812-3877	x	x			
Farmland Industries, Inc.					
1990-331					Company has made a commitment to conduct required studies.
1990-376					"
1990-377					"
1990-381					"
Aceto Chemical Company, Inc.					
2749-92	x	x			
2749-150	x	x			
2749-277					Offer to share in the cost of conducting required studies with the Atrazine Task Force accepted.
2749-321	x	x			
2749-336	x	x			
2749-371	x	x			
2749-485	x	x 3/			

Company Name & Registration Numbers	End Use Exemptions re-ceived by EPA	End Use Exemptions grant-ed by EPA	Voluntary Terminations[1] re-ceived by EPA	Voluntary Terminations[1] being process-ed	Comments & Decisions
Economy Products					
3770-158					Unable to locate. Further investigation underway.
Amvac Chemical Corp.					
5481-3854	x	x			
Helena Chemical Company					
5905-469		2/			Registration was transferred from Shell Chem. Co. Registration no. 201.
5905-470		2/			"
5905-3104	x	x			
5905-7877	x	x			
Tide Products, Inc.					
6735-4820	x	x			
6735-5533	x	x			
6735-5536	x	x			
Occidental Chemical Corp.					
7001-188	x	x			
Great Lakes Biochem Company, Inc.					
7364-3			x	x	
7364-4	x	x			
7364-8			x	x	
General Developments Corp.					
7476-1					Unable to locate. Further investigation underway.
BASF Wyandotte Chemical Corp.					
7969-54	x	x			
Chipman, Inc.					
8203-25	x	x			
Cypress Supply Company, Inc.					
8461-1					Unable to locate. Further investigation underway.
8461-29					"

Company Name & Registration Numbers	End Use Exemptions re-ceived by EPA	End Use Exemptions grant-ed by EPA	Voluntary Terminations[1] re-ceived by EPA	Voluntary Terminations[1] being process-ed	Comments & Decisions
Agway, Inc. 8590-271			x	x	
Aquarium Pharma-ceuticals 8709-1	x	x			
Habco, Inc. 8823-31	x	x			
Sunniland Corp. 9404-51	x	x			
Landia Chemical Company 9859-50	x	x			
9859-6213		*			
9859-6216		*			
Gowan Company 10163-6390		*			
Cape Chemical Company 10371-7408		*			
10371-7488		*			
Customs Services 10780-1					Unable to locate. Further investigation underway.
Tifchem Products, Inc. 10873-7361		*			
Agan Chemical Mfgrs, Ltd. 11603-9					Cost sharing, if maintained, must be validated in response to Registration Standard.
11603-10					"
Van Diest Supply Company 11773-1	x	2/			
Intrachem S.A. La Grebe 13801-7					Notice of Intent to Suspend is being deferred to Registration Standard.

Company Name & Registration Numbers	End Use Exemptions received by EPA	End Use Exemptions granted by EPA	Voluntary Terminations[1] received by EPA	Voluntary Terminations being processed	Comments & Decisions
Soluja Ltee					
15061-1				x	Cancellation referred to Registration Support and Emergency Response Branch for processing.
15061-3				x	"
Central Agricultural Chemical Company					
15590-1					Notice of Intent to Suspend is deferred to Registration Standard.
Marzone Chemicals, Ltd. c/o Pesticide Advisory Service					
18861-2				x	Cancellation referred to Registration Support and Emergency Response Branch for processing.
Drexel Chemical Company					
19713-6					Offer to share cost of conducting the required studies with the Atrazine task force has been accepted.
19713-7					"
19713-11					"
I. Pi. Ci. S.P.A					
33660-1					Cost sharing, if maintained, must be validated in response to Registration Standard.
Axon Corporation					
34771-2				x	Cancellation is referred to Registration Support and Emergency Response Branch for processing.
34771-7				x	
Mid-America Chemical Company, Inc.					
36480-6		2/			
36480-14		2/			

Company Name & Registration Numbers	End Use Exemptions received by EPA	End Use Exemptions granted by EPA	Voluntary Terminations[1] received by EPA	Voluntary Terminations[1] being processed	Comments & Decisions
Burdette Mill & Gin, Inc.					
37800-8385		*			
37800-8388		*			
37800-8389		*			
37800-8390		*			
37800-8391		*			
37800-8392		*			
37800-8393		*			
37800-8394		*			
37800-8395		*			
37800-8396		*			
R. F. Lindsey & Sons					
38749-10310		*			
Vertac Chemical Corp.					
39511-14					Notice of Intent to Suspend is deferred to Registration Standard.
39511-113					" Registration transferred from Shell Chem. Co. Registration no. 201.
Rumianca					
40643-1					Notice of Intent to Suspend is deferred to Registration Standard.
L & L Industries, Inc.					
42771-2		2/			
Hercules, Inc.					
43142-22			x	x	
Marzone, Inc.					
44317-3300		*			